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CLAIM AMENDMENTS

2 +1-815-642-9264

1-6. (canceled)

1 7. (previously presented): A method of manufacturing a semiconductor circuit on a substrate, 2 comprising the steps of: 3 providing first and second substrate handling robots; 4 coupling a first process chamber to the first robot so that the first robot can transfer a substrate 5 into and out of the first process chamber, wherein the first process chamber is a deposition chamber or 6 a plasma chamber, and wherein the first process chamber is not coupled to the second robot; 7 coupling a second process chamber to the second robot so that the second robot can transfer a 8 substrate into and out of the second process chamber, wherein the second process chamber is a 9 deposition chamber or a plasma chamber, and wherein the second process chamber is not coupled to 10 the first robot: 11 coupling one or more pass-through chambers to both the first robot and the second robot so 12 that both the first robot and the second robot can transfer a substrate into and out of each of the pass-13 through chambers, wherein said one or more pass-through chambers include a first pass-through 14 chamber: and 15 subsequently performing the sequential steps of: the first robot transferring a first substrate into the first pass-through chamber; 16 17 heating said first substrate within the first pass-through chamber; and 18 the second robot removing said first substrate from the first pass-through chamber. 1 8. (previously presented): A method according to claim 7, further comprising the subsequent step of: 2 the second robot transferring said first substrate to the second process chamber. 1 9. (previously presented): A method according to claim 8, further comprising the subsequent 2 sequential steps of: 3 the second robot removing said first substrate from the second process chamber; 4 the second robot transferring said first substrate into one of the pass-through chamb 5 the first robot removing said first substrate from said one pass-through chamber, an 6 the first robot transferring said first substrate to the first process chamber.

1	10. (previously presented): A method according to claim 9, wherein said one pass-through chamber is
2	the first pass-through chamber.
l	11. (previously presented): A method according to claim 9, further comprising the steps of:
2	after the step of the second robot transferring said first substrate to the second process
3	chamber, depositing tantalum or tantalum nitride on the substrate within the second process chamber;
4	and
5	after the step of the first robot transferring said first substrate to the first process chamber,
6	depositing copper on the substrate within the first process chamber.
1	12. (previously presented): A method according to claim 9, further comprising the steps of:
2	after the step of the second robot transferring said first substrate to the second process
3	chamber, removing native oxide from the surface of the substrate within the second process chamber;
4	and
5	after the step of the first robot transferring said first substrate to the first process chamber,
6	depositing copper on the substrate within the first process chamber.
1	13. (previously presented): A method according to claim 12, further comprising the steps of:
2	coupling a third process chamber to the second robot so that the second robot can transfer a
3	substrate into and out of the third process chamber, wherein the third process chamber is not coupled
4	to the first robot;
5	after the step of removing native oxide and before the step of the second robot transferring the
6	first substrate into one of the pass-through chambers, performing the sequential steps of:
7	the second robot removing the first substrate from the second process chamber;
8	the second robot transferring the first substrate into the third process chamber; and
9	within the third process chamber, depositing tantalum or tantalum nitride on the first substrate.
1	14. (currently amended): A method according to claim 7, further comprising the steps of:
2	coupling a loadlock chamber to one of said first and second robots so that said one robot can
3	transfer a substrate into and out of the loadlock chamber, wherein the loadlock chamber is not coupled
4	to the other one of said first and second robots, and wherein the loadlock chamber is not coupled to
5	any of said one or more pass-through chambers; and

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6	before the step of the first robot transferring said first substrate into the first pass-through
7	chamber, said one robot removing said first substrate from the loadlock chamber.
1	15. (currently amended): A method according to claim 7, further comprising the steps of:
2	coupling a loadlock chamber to one of said first and second robots so that said one robot can
3	transfer a substrate into and out of the loadlock chamber, wherein the loadlock chamber is not coupled
4	to the other one of said first and second robots, and wherein the loadlock chamber is not coupled to
5	any of said one or more pass-through chambers; and
6	after the step of the second robot removing said first substrate from the first pass-through
7	chamber, said one robot transferring said first substrate into the loadlock chamber.
1	16. (currently amended): A method according to claim 7, further comprising the steps of:
2	coupling a loadlock chamber to the first robot so that the first robot can transfer a substrate into
3	and out of the loadlock chamber, wherein the loadlock chamber is not coupled to the second robot, and
4	wherein the loadlock chamber is not coupled to any of said one or more pass-through chambers; and
5	before the step of the first robot transferring said first substrate into the first pass-through
6	chamber, the first robot removing said first substrate from the loadlock chamber.
l	17. (currently amended): A method according to claim 8, further comprising the steps of:
2	coupling a loadlock chamber to the first robot so that the first robot can transfer a substrate into
3	and out of the loadlock chamber, wherein the loadlock chamber is not coupled to the second robot, and
4	wherein the loadlock chamber is not coupled to any of said one or more pass-through chambers; and
5	after the step of the second robot transferring said first substrate to the second process
6	chamber, the subsequent steps of:
7	the second robot transferring said first substrate into one of the pass-through chambers;
8	the first robot removing said first substrate from said one pass-through chamber; and
9	the first robot transferring said first substrate into the loadlock chamber.
1	18. (previously presented): A method according to claim 7, further comprising the step of:
2	providing a resistive heater within the pass-through chamber;
3	wherein the heating step comprises the step of said resistive heater heating said first substrate
4	within the pass-through chamber.

2 +1-815-642-9264

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J	19. (previously presented): A method according to claim 7, wherein the heating step comprises the step
2	of:
3	directing infrared radiation so as to heat said first substrate within the pass-through chamber.
1	20. (previously presented): A method of depositing a copper layer on a substrate, comprising the steps
2	of:
3	providing first and second substrate handling robots;
4	coupling a first process chamber to the first robot so that the first robot can transfer a substrate
5	into and out of the first process chamber, wherein the first process chamber is a deposition chamber or
6	a plasma chamber, and wherein the first process chamber is not coupled to the second robot;
7	coupling a second process chamber to the second robot so that the second robot can transfer a
8	substrate into and out of the second process chamber, wherein the second process chamber is a
9	deposition chamber or a plasma chamber, and wherein the second process chamber is not coupled to
10	the first robot;
11	coupling one or more pass-through chambers to both the first robot and the second robot so
12	that both the first robot and the second robot can transfer a substrate into and out of each of the pass-
13	through chambers, wherein said one or more pass-through chambers include a first pass-through
14	chamber, and
15	subsequently performing the sequential steps of:
16	the first robot transferring a first substrate into the first pass-through chamber;
17	heating said first substrate within the first pass-through chamber;
18	the second robot removing said first substrate from the first pass-through chamber;
19	the second robot transferring said first substrate to the second process chamber;
20	within the second process chamber, depositing tantalum or tantalum nitride on the substrate;
21	the second robot transferring said first substrate into one of the pass-through chambers;
22	the first robot removing said first substrate from said one pass-through chamber;
23	the first robot transferring said first substrate into the first process chamber; and
24	within the first process chamber, depositing copper on the substrate.
1	21. (previously presented): A method of depositing a copper layer on a substrate, comprising the steps
2	of:
3	providing first and second substrate handling robots;

2 +1-815-642-9264

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4	coupling a first process chamber to the first robot so that the first robot can transfer a substrate
5	into and out of the first process chamber, wherein the first process chamber is a deposition chamber or
6	a plasma chamber, and wherein the first process chamber is not coupled to the second robot;
7	coupling a second process chamber to the second robot so that the second robot can transfer a
8	substrate into and out of the second process chamber, wherein the second process chamber is a
9	deposition chamber or a plasma chamber, and wherein the second process chamber is not coupled to
10	the first robot;
11	coupling one or more pass-through chambers to both the first robot and the second robot so
12	that both the first robot and the second robot can transfer a substrate into and out of each of the pass-
13	through chambers, wherein said one or more pass-through chambers include a first pass-through
14	chamber; and
15	subsequently performing the sequential steps of:
16	the first robot transferring a first substrate into the first pass-through chamber;
17	heating said first substrate within the first pass-through chamber;
18	the second robot removing said first substrate from the first pass-through chamber;
19	the second robot transferring said first substrate to the second process chamber;
20	within the second process chamber, removing native oxide from the surface of the substrate;
21	the second robot transferring said first substrate into one of the pass-through chambers;
22	the first robot removing said first substrate from said one pass-through chamber;
23	the first robot transferring said first substrate into the first process chamber; and
24	within the first process chamber, depositing copper on the substrate.
1	22. (previously presented): A method according to claim 21, further comprising the steps of:
2	coupling a third process chamber to the second robot so that the second robot can transfer a
3	substrate into and out of the third process chamber, wherein the third process chamber is not coupled
4	to the first robot; and
5	after the step of removing native oxide and before the step of the second robot transferring the
6	first substrate into one of the pass-through chambers, performing the sequential steps of:
7	the second robot removing the first substrate from the second process chamber;
8	the second robot transferring the first substrate into the third process chamber; and
9	within the third process chamber, depositing tantalum or tantalum nitride on the first substrate.